Communicable Disease Report

Hawai'i Department of Health
Communicable Disease Division
Disease Outbreak and Control Division

http://www.state.hi.us/doh/resource/comm_dis/cdr.html **July/August 2003**

2003-2004 Influenza Vaccine

The Recommendations of the Advisory Committee on Immunization Practices (ACIP) on the Prevention and Control of Influenza were published in the April 25, 2003 issue of the Morbidity and Mortality Weekly Report. The following is a condensed version of the recommendations.

Epidemics of influenza typically occur during the winter months and have been responsible for an average of approximately 36,000 deaths/year in the United States during 1990-1999. Influenza viruses can also cause pandemics, during which rates of illness and death from influenza-related complications can increase dramatically worldwide. Influenza viruses cause disease among all age groups. Rates of infection are highest among children, but rates of serious illness and death are highest among persons aged ≥65 years and persons of any age who have medical conditions that place them at increased risk for complications from influenza.

Influenza vaccination is the primary method for preventing influenza and its severe complications. The primary target groups recommended for annual vaccination are:

1) groups that are at increased risk for influenza-related complications (e.g. persons aged >65 years and persons of any age with certain chronic medical conditions)
2) the group aged 50-64 years because this group has an elevated prevalence of certain chronic medical conditions
3) persons who live with or care for persons at high risk (e.g., healthcare workers and household contacts who have frequent contact with persons at high risk and who can transmit influenza to persons at high risk).

Vaccination is associated with reductions in influenza-related respiratory illness and physician visits among all age groups, hospitalization and death among persons at high risk, otitis media among children, and work absenteeism among adults.

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Important Notice

The Communicable Disease Report (CDR) is going electronic. This will be the last printed issue of the CDR. Because of budget restrictions, all future issues will be available for perusal or printing on the Department of Health website at http://www.state.hi.us/doh/resource/comm_dis/cdr.html. The current and past issues are in Adobe Acrobat® pdf format, and may be printed from personal computers.

If you would like to be put on a list to receive an e-mail when a new issue is released, please send your email address to immunization@mail.health.state.hi.us with the subject "CDR."

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Primary Changes and Updates in the Recommendations

The 2003 recommendations include five principal changes or updates:

1) The optimal time to receive influenza vaccine continues to be October and November. However, because of vaccine distribution delays during 2000-2002, ACIP recommends that vaccination efforts in October focus on:
   a. Persons aged >50 years and those aged 6-23 months
   b. Persons aged 2-49 years with certain medical conditions that place them at increased risk for influenza-related complications
   c. Children aged <9 years receiving influenza vaccine for the first time
   d. Health care workers
   e. Household contacts of persons at high risk.

   Vaccination of other groups should begin in November.

2) Because young, otherwise healthy children are at increased risk for influenza-related hospitalization, influenza vaccination of healthy children aged 6-23 months continues to be encouraged when feasible. Vaccination of children aged ≥6 months who have certain medical conditions continues to be strongly recommended.

3) The 2003-2004 trivalent inactivated vaccine virus strains are A/Moscow/10/99 (H3N2)-like, A/New Caledonia/20/99 (H1N1)-like, and B/Hong Kong/330/2001-like antigens.

4) A limited amount of influenza vaccine with reduced thimerosal content, including 0.25-ml single-dose syringe preparations for children aged 6-35 months, should be available for the 2003-2004 influenza season.

5) Influenza vaccine for the U.S. market will be available from two manufacturers in 2003-2004, compared with three manufacturers in 2002-2003.

Target Groups for Vaccination

A. Persons at Increased Risk for Complications

- Persons aged ≥65 years
- Residents of nursing homes and other chronic-care facilities that house persons of any age who have chronic medical conditions
- Adults and children who have chronic disorders of the pulmonary or cardiovascular systems, including asthma
- Adults and children who have required regular medical follow-up or hospitalization during the preceding year because of chronic metabolic diseases (including diabetes mellitus), renal dysfunction, hemoglobinopathies, or immunosuppression (including immunosuppression caused by medications or by HIV)
- Children and adolescents (aged 6 months – 18 years) who are receiving long-term aspirin therapy and, therefore, might be at risk for experiencing Reye syndrome after influenza infection; and
- Women who will be in the second or third trimester of pregnancy during the influenza season.

B. Persons Aged 50-64 Years

Vaccination is recommended for persons aged 50-64 years because this group has an increased prevalence of persons with high-risk conditions.

C. Persons Who Can Transmit Influenza to Those at High Risk

Vaccination of health-care personnel and others in close contact with persons at high risk, including household contacts, is recommended, including:

- Physicians, nurses, and other personnel in both hospital and outpatient-care settings, including medical emergency response workers (e.g., paramedics and emergency medical technicians)
- Employees of nursing homes and chronic-care facilities who have contact with patients or residents
- Employees of assisted living and other residences for persons in groups at high risk
- Persons who provide home care to persons in groups at high risk
- Household contacts (including children) of persons in groups at high risk

In addition, because children aged 0-23 months are at increased risk for influenza-related hospitalization, vaccination is encouraged for their household contacts and out-of-home caregivers, particularly for contacts of children aged 0-5 months.

D. Pregnant Women

Because of the increased risk for influenza-related complications, women who will be beyond the first trimester of pregnancy (>14 weeks gestation) during the influenza season should be vaccinated. Pregnant women who have medical conditions that increase their risk for complications from influenza should be vaccinated before the influenza season, regardless of the stage of pregnancy.

E. Travelers

Persons at high risk for complications of influenza who were not vaccinated with influenza vaccine during the preceding

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After-hours Neighbor Island Emergency Reporting	800-479-8092

The Health State
HAWAI'I STATE DEPARTMENT OF HEALTH

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fall or winter should consider receiving influenza vaccine before travel if they plan to:

- Travel to the tropics
- Travel with organized tourist groups at any time of year
- Travel to the Southern Hemisphere during April-September

F. Healthy Young Children

Because children aged 6-23 months are at substantially increased risk for influenza-related hospitalizations, ACIP, the American Academy of Pediatrics, and the American Academy of Family Physicians continue to encourage vaccination of all children in this age group when feasible. ACIP continues to strongly recommend influenza vaccination of persons aged ≥6 months who have high-risk medical conditions.

The current inactivated influenza vaccine is not approved by FDA for use among children aged <6 months, the pediatric group at greatest risk for influenza-related complications. Vaccinating their household contacts and out-of-home caregivers might decrease the probability of influenza among these children.

Beginning in March 2003, the group of children eligible for influenza vaccine coverage under the Vaccines for Children (VFC) program was expanded to include all VFC-eligible children aged 6-23 months and VFC-eligible children aged 2-18 years who are household contacts of children aged 0-23 months.

G. General Population

In addition to the groups for which annual influenza vaccination is recommended, physicians should administer influenza vaccine to any person who wishes to reduce the likelihood of becoming ill with influenza, depending on vaccine availability.

Persons Who Should Not be Vaccinated with Inactivated Influenza Vaccine

Inactivated influenza vaccine should not be administered to persons known to have anaphylactic hypersensitivity to eggs or to other components of the influenza vaccine without first consulting a physician. Persons with acute febrile illness usually should not be vaccinated until their symptoms have abated.

Dosage

Dosage recommendations vary according to age group. Among previously unvaccinated children aged <9 years, two doses administered ≥1 month apart are recommended. If possible, the second dose should be administered before December. Among adults, studies have indicated limited or no improvement in antibody response when a second dose is administered during the same season. Even when the current influenza vaccine contains ≥1 antigens administered in previous years, annual vaccination with the current vaccine is necessary because immunity declines during the year after vaccination. Vaccine prepared for a previous influenza season should not be administered to provide protection for the current season.

Route

The intramuscular route is recommended for influenza vaccine. Adults and older children should be vaccinated in the deltoid muscle. Infants and young children should be vaccinated in the anterolateral aspect of the thigh.

For further information, including vaccine side effects and adverse reactions, strategies for implementing recommendations in health care settings, and recommendations for using antiviral agents for influenza, see "Prevention and Control of Influenza," Recommendations of the Advisory Committee on Immunization Practices (ACIP) in MMWR 2003; 52 (RR-8): 1-36, visit the National Immunization Program website at http://www.cdc.gov/nip, or call the Hawai`i Immunization Program at (808) 586-8300.

Note: FluMist™ Vaccine

On June 17, 2003, the FDA approved an intranasal, trivalent, cold-adapted, live, attenuated influenza vaccine (FluMist™) for use in healthy persons aged 5-49 years to prevent influenza A and B. The newly approved vaccine provides a new option for vaccinating healthy persons 5-49 years of age who either wish to avoid influenza or are in close contact with persons at high risk for developing serious complications from influenza infection. FluMist™ is not included in the Vaccines for Children (VFC) program.

Reference

Centers for Disease Control and Prevention. Prevention and Control of Influenza - Recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR* 2003; 52 (RR-8): 1-36.

Hawaii Influenza Season 2002-03 Summary

Hawai`i's influenza season, September 29, 2002 to May 24, 2003, started off later than the previous year. The majority of the cases occurred during late February (See Fig. 1). The dominant strain-types were A/Panama/2007/99-like (H3N2) and A/New Caledonia (H1N1). Both of these strains were included in the season's vaccine and might have been prevented by a flu vaccination. Influenza A strains dominated the influenza season comprising eighty-three percent (83%) of all influenza cases identified and fifty-six percent (56%) of all identified viral respiratory illnesses (Fig.2).

Although, influenza activity was generally lower than last year, there were three strains co-circulating throughout the season. Hawai`i's influenza surveillance for 2002-03 season detected 312 influenza A and 65 influenza B virus isolates reported to date. Information on antigenic characterization was available for 257 isolates:

- 76 Influenza A H3N2 (4 sub-typed as A/Panama/2007/99-like)
- 130 Influenza A H1N1 (2 sub-typed as A/NewCaledonia/20/99-like)
- 51 Influenza B (3 sub-typed as B/Hong Kong/ 22/2001-like)

For more information regarding Hawai`i's current and past influenza activity go to: http://www.state.hi.us/doh/resource/comm_dis/flu/index.htm

Figure 1. Respiratory Virus Isolates Reported to Hawaii Department of Health 2002-03 Influenza Surveillance Season N =377

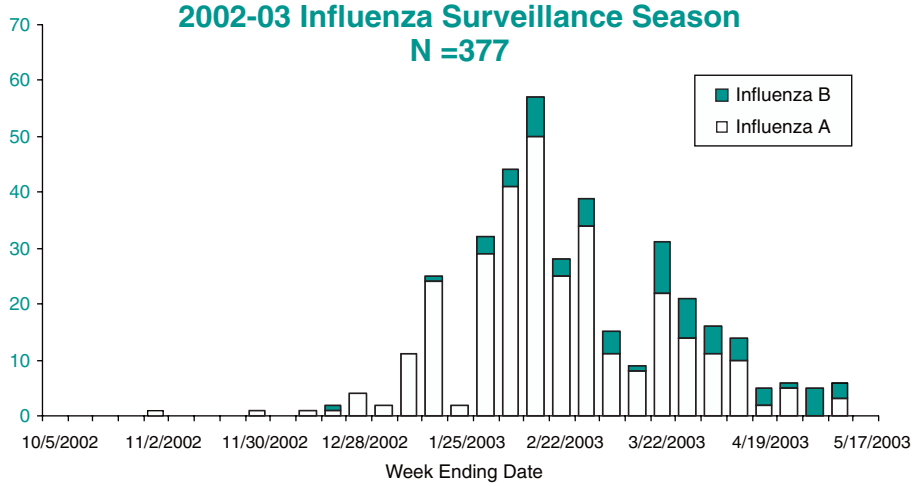
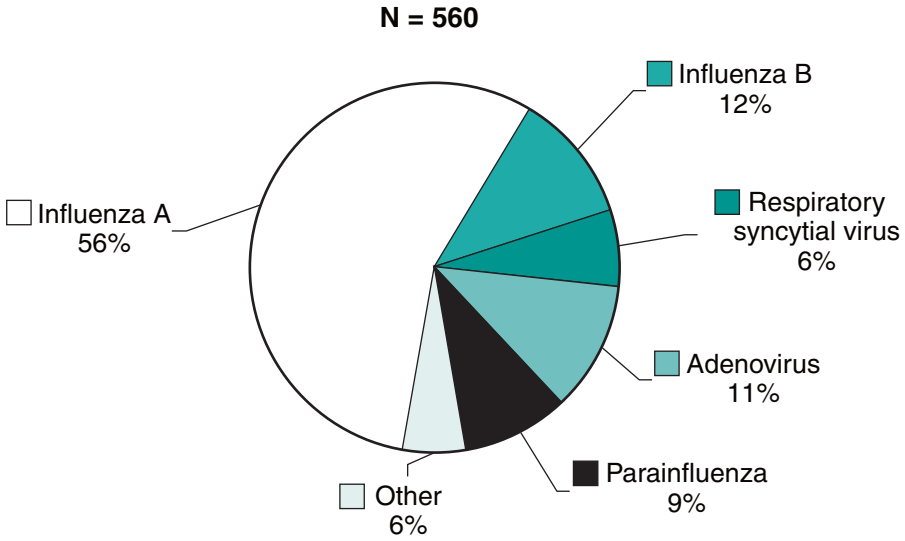


Figure 2. Distribution of Circulating Respiratory Viruses for 2002-03 Influenza Surveillance Season



* Other includes Coxsackie, Cytomegalovirus, Herpes Simplex, Enterovirus, and Echovirus

2002-03 Influenza Vaccine

The World Health Organization (WHO) recommended that the 2003-04 trivalent influenza vaccine for the United States contain A/New Caledonia/20/99-like (H1N1), A/Moscow/10/99-like (H3N2), and B/Hong Kong/330/01-like viruses. This recommendation was based on antigenic characterization of circulating influenza viruses.

During the period of September 2002 to February 2003, influenza A (H1N1), A (H1N2), (AH3N2) and B viruses circulated widely in North America during the 2002-03 season. Overall influenza activity in the Northern Hemisphere was mild to moderate.

Most influenza A (H3N2) viruses isolated worldwide during the 2002-03 season were similar to A/Panama/2007/99-like and A/Moscow/10/99-like viruses. The vaccine will antigenically protect against both influenza A strains. For more information regarding the influenza vaccine go to: http://www.cdc.gov/nip/vaccine/flu/default.htm - latest

Submitted by Tracy L. Ayers, M.S., Influenza Surveillance Coordinator, Disease Investigations Branch, Disease Outbreak and Control Division.

Hawai'i HIV/AIDS Epidemiologic Update

This article provides information on Hawai`i's HIV/AIDS--cases for the year 2002 and the five year period 1998-2002. It also compares Hawai'i and national AIDS data for 1998-2001.

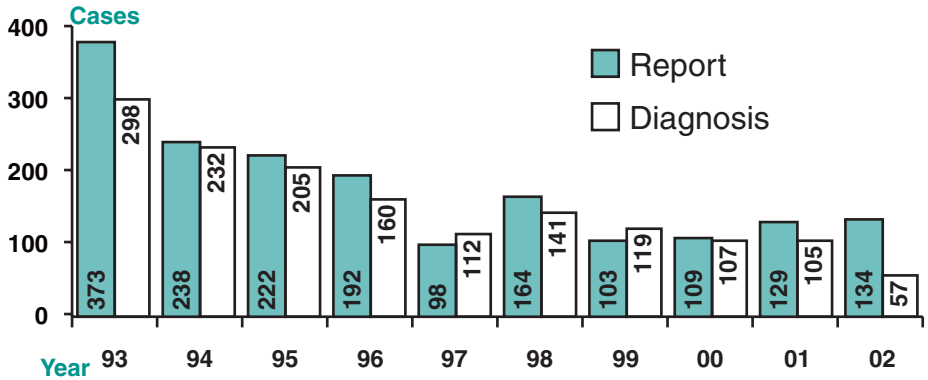
AIDS Update

Incidence and Incidence Rate: Since the first AIDS case was reported in Hawai'i in 1983 through 2002, the Department of Health (DOH) has received reports of 2,717 people with AIDS. Reports are documented on the date they are received and according to the date of diagnosis. There is often a lag between the date of diagnosis and the date the report is received. Hence, the differences demonstrated in Figure 1. The incidence of AIDS gradually increased each year through 1993, then decreased for four years, but spiked in 1998, returning to near baseline in 1999. An abrupt increase in incidence in 1993 was due to the expanded definition of AIDS. The increase in incidence in 1998 was likely due to the change in the Hawai'i Administration Rules that required laboratories to report all low CD4 results to the DOH. This resulted in additional cases being identified. From 1998 cases have declined based on the date of diagnosis.

In 2002, 134 new AIDS cases were reported for an incidence rate of 10.9 cases per 100,000 population. The 134 new AIDS cases reported in 2002 was 3.9% higher than for 2001 (129 cases), and 22.9% higher than in 2000 (109 cases). The 2001 total represented an 18.3% increase of reported AIDS cases from the year 2000. However these increases are not evident when the date of diagnosis is taken into consideration.

The increase in reported cases in 2001-2002 may be a result of the start of HIV reporting in September 2001. Providers reviewing medical records for HIV cases may have found and reported previously unreported AIDS cases. In 2002, the number of diagnosed cases was low; the data is still incomplete because of delays in reporting.

Figure 1. Hawaii AIDS Cases by Year, Report vs. Diagnosis, 1993-2002



Data for diagnosis in the current years should be considered provisional due to reporting delays.

Geographic Distribution: 639 AIDS cases were reported during the most recent five year period. The mean annual incidence rate was 10.5 cases per 100,000. Of these, 412 cases (64%) at time of diagnosis resided in Honolulu County; 106 cases (17%) in Maui County; 87 cases (14%) in Hawai`i County and 34 cases (5%) in Kaua'i County. The five year reported mean annual rates from the highest to the lowest were 16.5/100,000 for Maui County, 11.7/100,000 for Hawai`i County, 11.7/100,000 for Kaua`i County, and 9.4/100,000 for Honolulu County.

Sex: From the beginning of the epidemic through December 31, 2002, 93% (2,529) of reported AIDS cases were in males, while 7% (188) were in females. From 1998-2002, males still accounted for a much larger proportion of AIDS cases, while females accounted for a relatively small but increasing proportion of AIDS cases (11%).

Age: For the recent five year period, 42% (268) of AIDS cases were diagnosed in individuals in their thirties with 33% (214) in their forties. There were 105 cases (16%) over 49, 48 cases (8%) aged 20-29, 2 cases aged 13-19 and 2 cases less than age 13.

Race/Ethnicity: Caucasians accounted for 1,715 (63%) of the cumulative AIDS cases, Hawaiians 296 (11%), Filipinos 143 (5%), Hispanics 141 (5%), Japanese 119 (4%), and African-Americans 116 (4%). During 1998-2002, the percentage of reported AIDS cases among Caucasians decreased (60%) but still accounted for the largest proportion of cases, while the proportion of cases increased among Hawaiians (12%), Hispanics (6%), Filipinos (6%), and African-Americans (5%).

Risk/Exposure: Men who have sex with men (MSM) accounted for the majority 2,039 (75%) of the cumulative cases, followed by injection drug users (IDU) 194 (7%), MSM/IDU 179 (7%), heterosexual contact 141 (5%), and those without an identified risk 104 (4%). The remaining 2% of AIDS cases included those attributed to hemophilia, the receipt of blood or blood products, and perinatal infections. In 1998-2002, MSM continued to represent a majority of reported AIDS cases 429 (67%) although the proportion of AIDS cases in this group declined, while cases associated with IDU (9%) heterosexual contact (7%) and undetermined risk (11%) increased.

Prevalence: The number of persons living with AIDS in Hawai'i has increased annually. At the end of 2002, a total of 1,218 persons were living with AIDS, re-

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sulting in a state prevalence rate of 100.5 AIDS cases per 100,000. The average annual increase in the number of persons living with AIDS is 7.9% for 1998-2002. The increase in prevalence has been ascribed largely to the effect of successful new HIV treatments, such as HAART.

AIDS related Fatalities: Through December 31, 2002, there were 1,513 AIDS related deaths, resulting in a case fatality rate of 56%. AIDS-related deaths include a small proportion of persons with AIDS who die from causes unrelated to AIDS as reported on their death certificates. Because of improved treatment, survival after a diagnosis of AIDS has increased.

HIV Update

HIV infection became notifiable in Hawai'i in September 2001. HIV cases are reported using an Unnamed Tested Code (UTC). The use of an UTC establishes "uniqueness" while protecting the confidentiality of the HIV-infected individual.

By December 31, 2002, the DOH received 503 Hawai'i HIV (non-AIDS) case reports. These HIV cases include those diagnosed from previous and current years. The analysis of this HIV data is incomplete at present.

The Hawai'i HIV/AIDS Surveillance Program uses the formula provided by CDC [1] to estimate that the number of persons living with HIV/AIDS in Hawai'i was between 2,600 and 2,950 at the end of 2001. The estimated number of persons living with HIV infection (HIV prevalence) includes those living with a diagnosis of HIV or AIDS and those who may be infected but who are unaware of their serostatus. The estimate of HIV prevalence is based on Hawai`i's proportion of the national estimate of AIDS prevalence [2] at the end of 2001, and on the national estimate of HIV prevalence.[1] This estimate is lower than the national estimate in 1996, when the CDC estimated that Hawai`i's HIV prevalence was between 2,300 and 3,200. [3]

Figure 2. Percentage of AIDS Cases by Risk/Exposure, Hawai`i State and the United States, 1998-2001

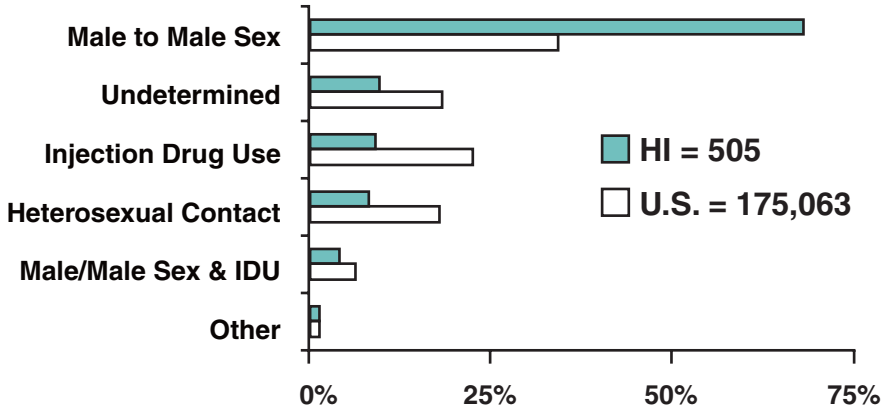
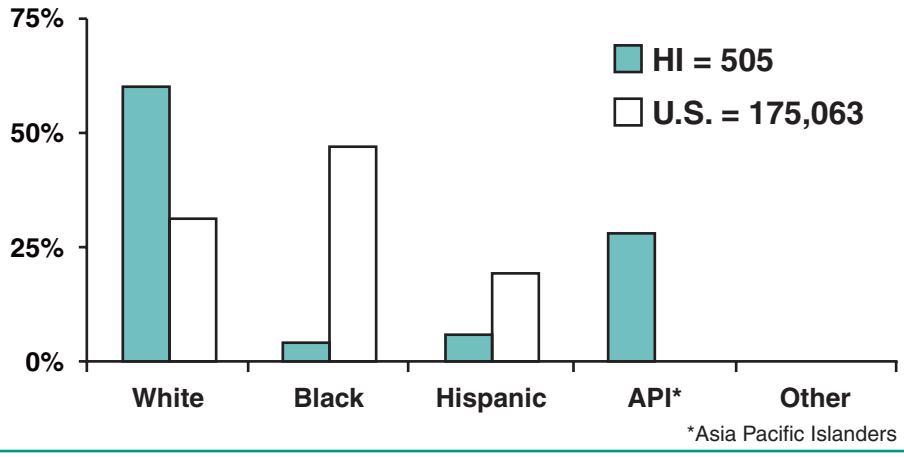


Figure 3. Percentage of AIDS Cases by Race, Hawai`i State and the United States, 1998-2001



AIDS Comparison: Hawai`i vs. the United States, 1998-2001

About 0.43% of the total U.S. population resides in Hawai`i and contributed 0.29% of the nation's AIDS cases in 1998-2001 [4,5] (the latest data available for national AIDS cases). In Hawai`i, the 2001 incidence rate of AIDS reported was 10.1 [4] cases per 100,000, below the U.S. rate of 14.7 cases per 100,000. This ranked Hawai`i twenty-fifth in the country. Comparing AIDS cases reported in Hawai`i to those reported in the United States as a whole in 1998-2001, a higher proportion of Hawai`i's AIDS cases were males (89% vs. 75%). National and state comparisons of risk behaviors is shown in Figure 2. A comparison of race between Hawai`i and the U.S. is shown in Figure 3. The age distribution of persons diagnosed with AIDS in Hawai'i was similar to that of the nation except in the 20-29 age group (7% vs. 13%) which was lower than that of the U.S. and the 30-39 year old group was higher in Hawai`i than in the U.S (43% vs. 41%).

Data collection

All unduplicated reported cases that were diagnosed in Hawai'i are included. Those cases that were first diagnosed in other states are excluded.

The HIV/AIDS Surveillance Program performs ongoing active and passive surveillance to collect HIV/AIDS cases. Active surveillance refers to strategies based on direct contact with health care providers and laboratory personnel, reviews of medical records and death cer-

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tificates, and follow-up of laboratory low CD4 results and confirmed-HIV positive tests. Passive surveillance refers to the health provider initiated reporting. AIDS cases are collected using CDC's standard case report forms while HIV cases are collected using the DOH standard forms. Both HIV and AIDS report forms have a supplemental form for race/ethnicity. Once collected, data are entered into a secured database (HIV/AIDS Reporting System-CDC provided software), which is accessible only to authorized persons. Reports in this system that contain errors or missing information are followed-up with the health providers. All HIV and AIDS data are maintained confidentially. The HIV/AIDS Surveillance Program is funded by the CDC.

For more information or to report cases, please call the HIV/AIDS Surveillance Program, STD/AIDS Prevention Branch in Honolulu at (808) 733-9010.

References

1. Centers for Disease Control and Prevention (CDC). Data for Decision Making; Developing Epidemiologic Profiles for HIV Prevention and Ryan White care Act Community Planning-Grantee Training Meeting Atlanta, GA January 28-31, 2003.
2. Centers for Disease Control and Prevention (CDC). Internal data release. August 16, 2002.
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5. Centers for Disease Control and Prevention (CDC). HIV/AIDS Surveillance Report 1997; 9(no.2): 1-44.

Submitted by Yuanshan (Sandy) Qiu, M.P.H., Epidemiological Specialist, HIV/AIDS Surveillance Program, STD/AIDS Prevention Branch.

Physician Advisory: False positive gonorrhea test results.

Over the past few months the Hawaii State Department of Health (DOH) has documented five cases of false positive gonorrhea test results related to the use of an FDA-approved nucleic acid amplification test (NAAT); one case also had a false positive chlamydia test result. All five cases were females in long term (2-10 years) mutually monogamous relationships seen in private sector settings. In three of the five cases the screening tests were done on asymptomatic women as a component of their annual family planning examination (one case was a 34 year-old married woman in a mutually monogamous relationship for six years). In two cases the tests were applied to women with vaginal discharge who were diagnosed and treated for bacterial vaginosis at the time the screening tests were obtained.

Neither confirmatory testing nor retesting was done by the primary care physicians. A review of the medical records revealed no documentation that a sexual history was obtained or discussion of possible false positive test results. The women were prescribed appropriate antimicrobial therapy and advised to have their partners examined and treated.

Importance of Retesting

The women and their partners were reexamined and retested at the Diamond Head Health Center on the day they received their test results (three of the five) and prior to treatment (three cases) or within a few hours after treatment (two and five hours respectively), using a different nucleic acid amplification test for gonorrhea and chlamydia. Each was also tested for gonorrhea by obtaining culture specimens from the female's endocervix and male's urethra and revealed no evidence of gonorrhea or chlamydia. On physical examination there was also no gross or microscopic evidence of mucopurulent cervicitis in the females or urethritis in the males.

Imperfect Specificity

The new NAATs for gonorrhea and chlamydia screening have very high ***yet imperfect*** specificity. Their routine application to screen women at low to zero risk for gonorrhea or chlamydia may lead to false positive test results. This is much more of a potential problem with gonorrhea as the community prevalence of gonorrhea in Hawai`i (approximately 1%) is significantly lower than that of chlamydia (approximately 4-5%).

Low Positive Predictive Value

The positive predictive value (PPV) of a screening test tells what proportion of all screening positive results are actually true positives (PPV = true positive results/all screen positive results). For tests with less than 100% specificity, the PPV will be impacted by the prevalence of the condition in the population undergoing screening. Even if one uses published excellent NAAT test performance characteristics (e.g., sensitivity = 98.2% and specificity = 99.3%), the low gonorrhea prevalence in Hawai`i negatively impacts the PPV. Because of the low gonorrhea prevalence, the predictive value of a positive gonorrhea screening test is less than 70%. This means that less than 70% of women in this population testing positive for gonorrhea using a NAAT will actually be infected with gonorrhea. The prevalence of gonorrhea in women over age 25 in Hawai`i is less than 0.5%, further decreasing the PPV when the screening test is applied to women in this age group.

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False positive gonorrhea

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The predictive value of a positive chlamydia test is higher (approximately 90%), reflecting the higher chlamydia prevalence in Hawai`i. But here also, the chlamydia prevalence among women over the age of 25 is less than 3%, decreasing the test's PPV when it is applied to older women. Hence annual routine screening of asymptomatic females over the age of 25 for chlamydia is not recommended.

The following is taken from an article in The Lancet discussing the uses and abuses of screening tests: "A badly understood feature of screening is the potent effect of disease prevalence on predictive values. Clinicians must know the approximate prevalence of the condition of interest in the population being tested; if not, reasonable interpretation is impossible. . . This message is important, yet not widely understood: when used in low prevalence settings, even excellent tests have poor positive predictive value. . . Although failing to diagnose sexually transmitted diseases can have important health implications, incorrectly labeling people as infected can wreck marriages and damage lives."[3]

CDC Recommendations: STD Screening Tests

The U.S. Centers for Disease Control and Prevention (CDC) has published a "Recommendations and Reports" document entitled: "Screening tests to detect *Chlamydia trachomatis* and *Neisseria gonorrhea* infections--2002. (Morbidity and Mortality Weekly Report (vol. 51, no. RR-15) dated October 18, 2002. The following recommendations are taken verbatim from this report:

1. All positive screening tests should be considered ***presumptive*** evidence of infection.
2. An additional test should be considered after a positive screening test, if a false-positive screening test would result in substantial adverse medical, social, or psychological impact for a patient.
3. Consideration should be given to routinely performing an additional test after a positive screening test if the positive predictive value is considered low (e.g., < 90%).

The CDC currently recommends annual chlamydia screening of sexually active women 25 years of age or younger as well as older women with new or multiple sex partners. Women at high risk for sexually transmitted diseases (STDs) should also undergo gonorrhea screening. In this series, three of the five females were older than 30 years of age, and none of the five had any known STD risk factors.

False positive test results should be considered when patients have unanticipated positive screening test results for gonorrhea or chlamydia. It is recommended that the possibility of false positive test results be entertained (especially in cases where the sexual history appears incompatible with the laboratory results) and that consideration be given to retesting the patient using a ***different*** test, or a confirmatory test. Obtaining a sexual history is imperative for both assessing STD risk and for the interpretation of STD screening test results.

We recommend that all physicians obtain sexual histories on their patients and selectively apply STD screening tests. If unexpected positive test results are found, a judicious approach might be to rescreen the client using a different NAAT or culture test (to confirm a gonorrhea case) and then promptly treat the patient while awaiting the repeat test results.

A strategy that includes obtaining a sexual history from patients, selective screening for STDs, and confirmation of unexpected positive test results is recommended by the DOH and the CDC.

For additional information or consultation, please call the DOH STD Prevention Program at (808) 733-9281 in Honolulu.

References:

1. Centers for Disease Control and Prevention. Screening tests to detect *Chlamydia trachomatis* and *Neisseria gonorrhoeae* infections–2002. MMWR Morb Mortal Wkly Rep 2002; 51(RR-15): 1-38.
2. Centers for Disease Control and Prevention. Sexually transmitted diseases treatment guidelines 2002. MMWR Morb Mortal Wkly Rep 2002; 51(RR-6): 32, 36.
3. Grimes DA, Schulz KF. Uses and abuses of screening tests. Lancet 2002; 359: 881-884.

Submitted by: Al Katz, M.D., M.P.H., Roy Ohye, M.S., and Venie Lee, M.S., Sexually Transmitted Disease (STD) Prevention Program, STD/AIDS Prevention Branch.

Hawai`i Health Care Law: Isolation and Control Requirements

Editorial Note: *The severe acute respiratory syndrome (SARS) outbreak has made this article particularly timely. Worldwide efforts to protect the public from SARS have relied on various isolation and control methods including the application of quarantine laws. The actual application of the various techniques have varied from country to country depending on the state of the emergency in a particular situation. Isolation within a hospital, home bound restrictions, the wearing of masks, hand washing, education and advice for high risk groups and the public are combined in multifaceted efforts to protect the public from the spread of this new disease.*

This article reviews the Hawai`i Isolation and Control Requirements, which can be found in Hawai`i Administrative Rules, Title 11, Chapter 156, Exhibit C.

As indicated in HAR11-156-4.3 "the interventions prescribed in Exhibit C apply to diagnosed or suspected cases as well as contacts of diagnosed or suspected cases of the communicable diseases listed".

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Hawai`i Health Care Law

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The introduction to Exhibit C states:

Any person informed by the department, a private physician, or hospital that he or she has or is suspected of having a communicable disease for which isolation is required, shall remain isolated in the manner prescribed by the department of health. Isolation shall include exclusion from school and workplace, and restriction from food handling and direct care occupations. It is the responsibility of the principal or director in charge of a school to prohibit any student diagnosed or suspected of having a communicable disease for which isolation is required from attending school until the expiration of the prescribed period of isolation. Parents, guardians, custodians or any other person in loco parentis shall not permit any child diagnosed or suspected of having a communicable disease for which isolation is required to attend school or to be present at any public gatherings until the expiration of the prescribed period of isolation. No person diagnosed or suspected of having a communicable disease for which isolation is required shall engage in any employment in which transmission of disease is likely to occur until expiration of the prescribed period of isolation. Every health care provider shall report immediately to the department any violation of such isolation directive.

A health care provider who suspects or diagnoses a disease listed in Exhibit C should communicate to the patient the isolation or control requirements designated by the Department of Health for the suspected or diagnosed disease. These isolation requirements apply not only to the patient but also to the contacts of that patient, although the isolation requirements can differ for the patient and the contacts.

The following diseases from Exhibit C are subject to isolation and control requirements for patients and/or contacts: *amebiasis, campylobacteriosis, varicella, cholera, cryptosporidiosis, diphtheria, E. coli 0157:H7, foodborne illness, Haemophilus influenzae, hepatitis A, hepatitis E, hemolytic uremic syndrome, influenza outbreak, measles, meningococcal disease, mumps, pertussis, plague, rabies, rubella, salmonellosis, shigellosis, streptococcal disease-Group A, tuberculosis, typhoid fever, vibriosis (other than cholera) and yersiniosis (other than plague).*

For example, a patient who has been diagnosed with a *Salmonella* stool infection is to be restricted from food handling and direct care occupations until two consecutive stool cultures, collected ≥ 24 hours apart and not less than 48 hours after cessation of antimicrobial therapy, are negative for *Salmonella.* Contacts of such a patient are to be restricted from food handling and direct care occupations until the stool is known to be culture negative.

A <u>contact</u> is defined as: *"a person who has been in such an association with an infected person or animal or a contaminated environment as to have had an opportunity to acquire the infection".*

A medical judgment as to whether a household member or other individual is a "contact" will have to be made by the health care provider. For example, the mother of an infant whose stool is positive for Salmonella should be considered a contact and restricted from food handling and direct care until the stool is known to be culture negative. If the mother works as a waitress in a restaurant she should be excluded from work until she has provided one stool sample with a negative culture for Salmonella. If the mother worked as a nurse, she should be excluded from caring for patients until a stool sample is negative.

On the other hand, if there is a family member who visits regularly, such as the mother's brother, but has no significant contact with the infant, who works as a busboy and lives in another household, he may not need to be excluded from work or provide a stool sample.

<u>Foodhandling</u> is defined as: *" any contact with food, beverages, or material and/or items used in their preparation that has the potential to result in transmission of infectious microorganisms via ingestion of the food and/or beverage. Examples of foodhandling include (but are not limited to) transporting food or food containers, preparation or service of food, and contact with utensils or food associated equipment."*

<u>Direct care occupations</u> are defined as: *"any occupational activity that has the potential to result in the transmission of infectious microorganisms from a caregiver to persons receiving care. Direct care occupations include persons engaged in providing care to children, patients, the elderly, or infirm."*

The form to be used for reporting of communicable diseases (the Communicable Disease Report form) has a question that asks whether the patient or a household member is a food handler, attends or works at a day care, or is a health care worker. Obtaining this information is the duty of the health care provider and will facilitate the provision of appropriate advice to the patient and any household members or other contacts.

It is clear from the above definitions and examples that there is room for and in fact a need for medical judgment as to what is the appropriate advice that should be given by a health care provider. As with any medical judgment that has the potential for untoward consequences (e.g. the potential for spread of Salmonella by a foodhandler or caregiver) the health care provider needs to be aware of the requirements of the law, to consider those requirements in the treatment and advice that is given to patients and to contacts, and to carefully document the basis for these actions.

While these Isolation and Control Requirements do have the force of law, the *lack* of a requirement in these regulations for isolation of a particular disease does not mean it should not be considered and recommended. An obvious example would be a case of smallpox. A less obvious example is the exclusion from school of a child with streptococcal pharyngitis until after the child has been on antibiotics for 24 hours as recommended elsewhere (see the "Red Book: Report of the Committee on Infectious Diseases, 24th ed, pg. 491"). The law is not a substitute for sound medical judgment.

Submitted by Richard P. Creagan, M.D., Epidemiological Specialist, Hawai`i District Health Office, and Mona R. Bomgaars, M.D., M.P.H.

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New combination vaccine, Pediarix

A new pentavalent combination vaccine that consists of Diphtheria and Tetanus Toxoids and Acellular Pertussis Absorbed (DTaP), Hepatitis B (Recombinant) and Inactivated Poliovirus Vaccine (IPV), developed by GlaxoSmithKline Biologicals, under the trade name, PEDIARIX™ was recently approved by the Food and Drug Administration (FDA) for use in the United States. The availability of Pediarix under the Hawaii Vaccine for Children Program will be addressed at a later date.

The FDA has currently licensed this vaccine for use only as a primary series at 2, 4, and 6 months of age. The Advisory Committee on Immunization Practices (ACIP) has published guidelines for use of this product (in the MMWR supplement) on March 14, 2003 / 52(10);203-204 (see link below) http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5210a8.htm

- **Pediarix is approved for use in infants and children aged 6 weeks through 6 years.** Primary usage will be for infants at ages 2, 4 and 6 months.

- **Recommended interval between doses of Pediarix is 6-8 weeks (preferably 8 weeks).** A minimum interval of four weeks between first and second doses may be used in an accelerated immunization schedule; the third dose should not be given before age 24 weeks.

- **Acceptable to interchange Pediarix with other vaccines containing one or of the same components.** For the DTaP component it is preferred that Infanrix® (which is identical to the DTaP component of Pediarix) be used for the immunization series. However, immunization should NOT be deferred because the type of DTaP previously administered is unavailable or unknown.

- **Boosters – Pediarix is not approved for the fourth or fifth dose of DTaP or fourth dose of IPV.**

- **Special Pediarix guidelines for hepatitis B:**

  - A birth dose of single-antigen vaccine is recommended for all infants but MUST be administered to infants who are born to women who are HBsAg-positive or whose HBsAg status is unknown.

    Birth dose followed by three doses of PEDIARIX™ at ages 2, 4, and 6 months.

  - It is acceptable to use a 3-dose series of Pediarix (for example, ages 2, 4 and 6 months) in an infant who has already received a dose of hepatitis B vaccine at birth. This receipt of a total of four hepatitis B vaccine doses is acceptable.

  - The third dose of PEDIARIX™ should be administered at least 16 weeks after the first dose and at least eight weeks after the second dose but not before age six months.

- **Fever:**

  - Post-immunization fever is more common when Pediarix is given at the same time as Hib vaccine, or at the same time as Hib vaccine plus pneumococcal conjugate vaccine (PCV) than vaccination using separate DTaP, IPV and Hep B doses.

- **Special guidelines for the DTaP and IPV (polio) components of Pediarix:**

  - The ACIP did not address how children who inadvertently receive their 4th or 5th DTaP dose and/or 4th IPV dose as Pediarix should be managed. The CDC is currently working to develop consensus recommendations as to whether or not repeat doses of DTaP and/or IPV should be given in these situations.

No interim or approved consolidated Vaccine Information Statement (VIS) exists for this new combination vaccine.

Providers must give the parent or guardian a separate VIS for DTaP, hepatitis B, and the inactivated polio vaccines before administering Pediarix vaccine to an infant.

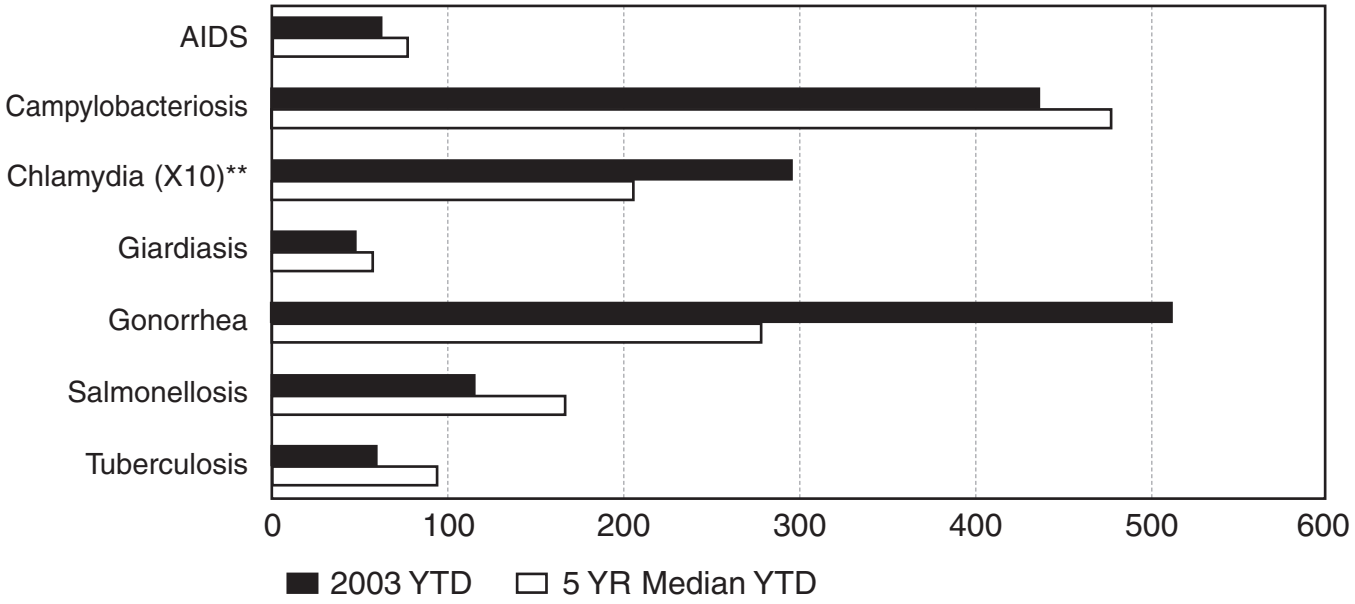
Handling and Storage

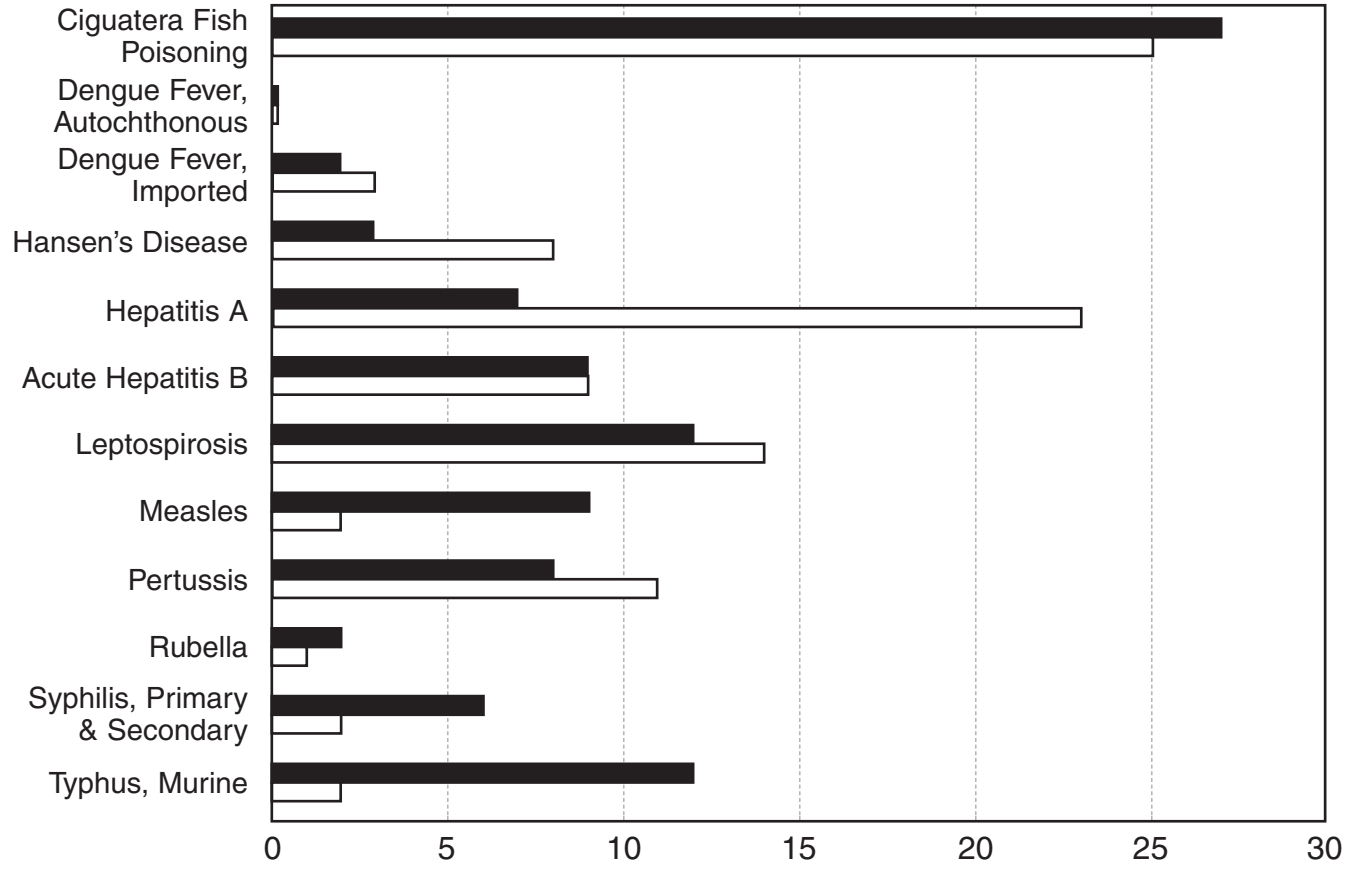
The new combination vaccine, like its separate components, must be stored in a refrigerator no lower than 35° Fahrenheit and no higher than 46° Fahrenheit (2° to 8° Celsius). All immunization providers should have a reliable temperature gauge or thermometer that is checked at least once (preferably twice) daily, to verify that the refrigerator is within the 35° to 46° F range. **DO NOT FREEZE**. All vaccines should be stored on the shelves and not on the refrigerator door.

Submitted by Steven Terrell-Perica, M.A., M.P.H., M.P.A., Immunization Public Health Advisor, Centers for Disease Control and Prevention.

Communicable Disease Surveillance

Selected Diseases by Date of Report*
Hawai'i, 2003 Year-to-date Through July





* These data do not agree with tables using date of onset or date of diagnosis.
** The number of cases graphed represent 10% of the total number reported.

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Communicable Disease Report

July/August 2003

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